**CSE 332 Project 1 Write up**

Your Name

Your UW NetID

1. **Who and what did you find helpful for this project?**
2. **How did you test that your stack implementations were correct?**

1. **The file secret.wav is a backwards recording of a word or short phrase. Use sox (or another converter) and your program to reverse it, and write that as the answer to this question.**

1. **Other than java.util.EmptyStackException, did you use any classes from the Java framework or other class library?**
2. **Your array stacks start with a small array and double in size if they become full. Assuming the computer had enough memory, how many times would this resizing occur (explain how you got the answer) for a .dat file with:**

**a) One million lines?**

**b) One billion lines?**

**c) One trillion lines?**

1. **How might you implement QueueStack (i.e. simulate a Stack using Queue as internal data structure) with one or more instances of a FIFO Queue? Assuming your Queue class provides following operations: enqueue(), dequeue(), isEmpty(), and size(), implement push() and pop() operations of QueueStack.**

public class QueueStack implements DStack {

 private int size;

 // TODO: Add necessary fields

 public QueueStack() {

 this.size = 0;

 // TODO: initialize your fields

 }

 public void push(double d) {

 // TODO: Implement this method

 }

 public double pop() {

 // TODO: Implement this method

 }

 // Assume other methods (peek & isEmpty) are implemented

}

1. **Why would a stack implementation using a queue, as you described in the previous problem, be worse than your array and linked-list stack implementations? Explain in terms of asymptotic bounds.**
2. **In the process of making your generic stack implementations from your non-generic ones, what sort of errors did you encounter and how did you resolve them?**
3. **How much did you have to understand about the code in Reverse.java to make the changes to use your generic stacks?**
4. **If you did “Above & Beyond”, describe each of your extra credit implementations in detail.**

1. **What did you enjoy about this assignment? What did you hate? What could you have done better?**

1. **Anything else you would like to include?**